



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/998,284

11/30/2001

Charlotte Horsmans Poulsen

674523-2012

5487

27890 7590 11/20/2007
STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

NASHED, NASHAAT T

ART UNIT

PAPER NUMBER

1656

MAIL DATE

DELIVERY MODE

11/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/998,284

Applicant(s)

POULSEN ET AL.

Examiner

Nashaat T. Nashed, Ph. D.

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 9-15, 34, 35 and 40-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-15, 34, 35, and 40-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1656

Claims 1-3, 9-15, 34, 35, and 40-50 are under consideration.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 9-15, 34, 35, and 40-50 are rejected under 35 U.S.C. 103 as being unpatentable over Hamade *et al.* (IDS: reference AF, EP-0866103 A1) in view of US patent 5,770,188 ('188, Hamade *et al.*), Hansen *et al.* [J. Biol. Chem. 272 (17), April 25, 1997, pages 11581-11587] and James *et al.* [J. Food Biochem. 1997, 21, 1-52] for the reasons set forth in the prior Office action mailed May 25, 2007.

Claims 1-3, 9-15, 34, 35, and 40-50 are rejected under 35 U.S.C. 103 as being unpatentable over Hamade *et al.* (IDS: reference AF, EP-0866103 A1) in view of US patent 5,770,188 ('188, Hamade *et al.*), U. S. Patent 6,251,626 B1 [626 patent, Stougaard *et al.*] and James *et al.* [J. Food Biochem. 1997, 21, 1-52].

In response to the above rejection, Applicants reiterated their previous arguments and assert that Hamade *et al.* do not teach the claimed composition because Hamade *et al.* do not teach or suggest the two-enzyme composition, and the other two references do not remedy the deficiencies of Hamade *et al.*

Applicants arguments filed 9/24/07 have been fully considered, but they are found unpersuasive. The examiner disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The cited prior art contain specific suggestion of the claimed invention (Hamade *et al.*) and the inclusion of glucoamylase in antifouling composition. Hamade *et al.* indicated that the substrate in the antifouling composition could be either one that is added to the composition directly or that was generated by one or more enzymes in the composition. See Hamade *et al.* page 3, lines 38-46. Thus, Hamade *et al.* have provided at least a suggestion to the ordinary skill in the art, if not taught the two enzymes system. As indicated in the previous Office action, the '188 patent which teaches a stable and durable antifouling composition comprising amyloglucosidase and starch was added to provide a nexus between amyloglucosidase and antifouling

Art Unit: 1656

composition and expectation of success from the same art of antifouling composition. The teaching of the '188 patent should overcome any doubt the applicants may have about the obviousness of their invention. Applicants assert that James *et al.* is of different art, i.e., food biochemistry, and that one of ordinary skill in the art would not have looked at. The examiner disagrees in view of the ability of the ordinary skill in the art to search electronic databases using commercially available search engines such as STN. As pointed out by applicants, James *et al.* is review article about the use of glucoamylases in industry and the commercial availability of various glucoamylase with various properties. One of ordinary skill in the art at the time of invention would have found James *et al.* and identify it as art of interest regarding the antifouling composition.

Applicants argue that, to produce a two-enzyme system as alleged by the examiner would require a skilled person to choose to produce a more complex and more expensive system without providing any reasons or advantages that the system is worthwhile, and without providing any reasonable expectation that a second enzyme may be successfully included. Applicants' statement is inaccurate and unjustified. Once again, Hamade *et al.* teach at least two-enzyme system on page 3, line 38-46. The suggestion made by Hamade *et al.* indicates that such a composition is desirable and would have given one of ordinary skill in the art reasonable expectation of success. Applicants have provided no evidence or any reasonable argument as why one of ordinary skill in the art would doubt the teaching of Hamade *et al.* and why the ordinary skill in the art would not have had expectation of success. The prior art taken together provides one of ordinary skill in the art with the motivation, the knowledge, and expectation of success. Thus, the claimed invention was within the ordinary skill in the art to make and use at the time was made and was as a whole, clearly *prima facie* obvious.

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashaat T. Nashed, Ph. D. whose telephone number is 571-272-0934. The examiner can normally be reached on MTWTF.

Art Unit: 1656

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen K. Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nashed/

Nashaat T. Nashed, Ph. D.

Primary Examiner

Art Unit 1656